11/19/2016 - 2nd morning session with Marc Darmon: continuation of discussions on the 1st chapter
"Topology of the Signifier" from *Essays on Lacanian Topology*

Marc Darmon – I will try to speak loudly while waiting for someone to fix the microphone problem. I must say that Henri's presentation will make my task easier, since I will try to answer Melman's questions from last time.
That is to say, to discuss the term "topology of the signifier," since Melman suggested last time that the unconscious was a matter of continuity and therefore justified the use of topology, whereas the space of signifiers was discrete, as Henri has just said. So in this first chapter, I focused on establishing topology on a solid foundation.
Hello, Mr. [*Mr. Melman arrives*]. Henri gave us a presentation on what topology is and revisited Cantor's question, Cantor's continuum hypothesis, and your proposal that the unconscious belongs to the continuum and therefore justifies topology, unlike the space of signifiers, which, belonging to the discrete, did not belong to topology. This brings us back to the question I ask in the first chapter, entitled "Topology of the Signifier," where I attempted to establish the reference to topology based on what the signifier was and Saussure's approach to this signifier. I noted in Saussure the paradoxical and curious nature of the signifier, which, as Saussure said, is a negative, complex, and differential entity. According to Saussure, a signifier is not comparable to objects in nature, that is, unlike the Stoics who spoke of *the lecton;* the signifier and the signified in terms of the corporeal and the non-corporeal, the incorporeal, for Saussure the signifier is incorporeal, that is to say, the signifier itself does not depend on its vocal or scriptural incarnation; as in a game of chess, the material support of the pieces does not matter. So for Saussure, the signifier is something that cannot be confused with the acoustic image. So how can it be grasped? On the surface, it is indeed something discrete, comparable to a set of points. However, Saussure does not retain this image of a set of separate points or lines, but speaks of a line or the medium of a sheet of paper, with the signifier on the front and the signified on the back. And he says that they are inseparable in a way: when you cut the front, you inevitably cut the back.
So the image that comes to mind is that of a surface, a continuous line or a continuous surface. There is an interplay between this continuity and what he means by a break, the story of the scissors, and indeed in the example I took from Saussure in this first chapter, the physical medium of the sentence, for example, may not have any real break and yet manifest a break. If we make a recording of the sentence "*If I learn it*," it will be a continuous image. That is to say, the cut that will determine the meaning of this sentence, that is, between "it" and "learn" or between "I" and "learn," is quite convenient, isn't it? This break will not appear on a phonographic recording of this sentence, but it is a break that belongs to the signifier, not to the physical medium of the sentence. In other words, the breaks that appear and determine the meaning of the sentence are not always, or in general, breaks that are materialized by an actual break in the vocal cord. So it's curious, it's a break that is immaterial according to Saussure. So can we equate signifiers with isolated points? If it is a discrete space, they are points in a discrete space made up of isolated points, meaning that each point has a neighborhood, an open space that is not supposed to contain another point. That is what a discrete space is.
Virginia Hasenbalg-Corabianu – Can you repeat that: the discrete is a point...
Mr. Darmon – That is, they are isolated points where the neighborhood of each point does not contain any other point in space. So we can say that, initially, this

This is not the case with signifiers, since signifiers are found in close proximity to one another. There is a relationship; if we are talking about points, there is a relationship between these points, so we cannot really speak of discrete space with regard to signifiers, since signifiers are located in the vicinity of other signifiers. Can we speak of points? Saussure tells us that it is an entity, and this is what Lacan takes up in quite a few seminars, particularly in *Identification.* He tells us that they are negative differential entities that can be represented by complex numbers, and also have the particularity that the "signifier" side and the "signified" side are, in a way, inseparable. So in Saussure's notes, which were published a few years ago, called Écrits de linguistique générale, which brings together Saussure's scattered writings, we see that Saussure criticized the isolated representation of signifier over signified, that is, capital S over small s, something he does not take up except to criticize it. In other words, for him, he put the signified at the top and the signifier at the bottom. The writing that truly reflects this is either that we take the point of view of the signifier and we should write a signifier at the bottom, he writes the signifier at the bottom, for example, capital A, which corresponds to several ideas, that is, a, b, c at the top

or we take the point of view of the idea of the signified and we should write small *a* at the top, but which would be approached by several signifiers *A*, *B*, *C* at the bottom

So, a more complex representation that corresponds to an interplay between what is in the signifier layer and the signified layer, which is itself the result of differences, i.e., there are two levels of differences that come into play, so we come back to Lacan's question about what will link these two layers and Lacan's proposal of the capiton point to connect things.
Well then, I will question the aspect of discrete space as far as the signifier is concerned, and I will also question the point as representing a signifier, because one property that Lacan took up very clearly and very frequently is that the signifier is different from itself. If the signifier is different from itself, can it be assimilated to a point? A point is identical to itself; that is to say, in mathematics, if you name the vertices of a square A, B, C, you cannot, in the same figure, name the vertices of a triangle inscribed in this square A, B, C, that is to say, it will not be possible to name two different points with the same letter, whereas this property of difference from itself of the signifier is what we encounter in our practice, our clinic, and it is what Lacan allows himself in the graph of alphas, betas, and gammas, since several points on this graph, two points on this graph, are named alpha, two points on this graph are named beta, gamma, etc., so it exists, so that this graph of alphas, betas, and gammas truly accounts for the signifier since, contrary to mathematical usage, the points, the vertices of this graph, certain vertices of this graph bear the same letter. Well, we'll see that when we study this question.
So, from this point of view, is there a difference between letters and signifiers? On the surface, the space occupied by letters seems even more discreet and discrete than that occupied by signifiers, since letters are signs that can be isolated and considered in their materiality and unity, making it difficult to talk about letters as a differential and negative entity. But if we look closely, letters depend on the alphabetical system in use, that is, there are no letters in themselves; letters depend on the system, on the set of letters in a given order

. In other words, even if we borrow from other languages, especially in mathematics, for example, the aleph, Henri told us about $\aleph_0$ (*aleph-zero*) and $\aleph_1$ (*aleph 1*) earlier. Cantor was forced to look for a letter in another script that would represent something unheard of, and he chose the letter א(aleph), the first letter of the Hebrew alphabet and the first letter missing at the beginning of the Bible.
So, let's consider letters this time. We realize that we don't recognize a letter because it resembles its prototype, as we might spontaneously think. But a letter can take on multiple forms. If we take the example of the letter
"t," which can be written in one way but also in another, with an infinite variety of ways of writing the letter "t," the essential thing is that we do not confuse, in a given alphabetical system, the letter "t" with the letter "l," for example, or the letter "i." But we can imagine that in another alphabetical system, the letter "t" could be assimilated to another letter. So, in a given system, in a finite set, we have a set of letters that cannot be confused with others, that is, they are different from others, and so we find the characteristic that I stated for the signifier, of being differential, negative or positive, that is to say, a letter is something, as we will see in the story of *The Purloined Letter,* which is strange in relation to objects in reality, which makes it very difficult for the police to find it. This letter is strange because it is elusive in a way; it is also an entity that is positive and differential, which we cannot grasp in its essence. positive and differential entity that cannot be grasped in its essence. There you have it. So, the space of letters. The space of letters. We could say from what I have just stated that a letter depends on all the letters from which it differs in a given set. So letters are not isolated points. On the surface, they are isolated points. But in reality, in terms of their actual space, letters are somehow linked by their differences. So I will be more cautious, or rather, I will continue to wonder which topological support, which topological space, can correspond equally well to the signifier and the letter, since neither the signifier nor the letter can be assimilated to the points that occupy the work of topologists and mathematicians. But we could say that both in terms of the signifier and the letter, if we can question positive and isolated entities, what is most real, let's say, what makes up the reality of the signifying field or the literal field, is what lies *between,* that is, how each unit relates to the others.
Well, we talked about the cut, and indeed what introduces meaning, both in the signifier and in the written text, is where the cuts occur. There you have it.
So, that's what this questioning of the space of the signifier or the topology of the signifier is all about.
We can say that, for Lacan, in *Identification* or in the seminars where he draws on surface topology, we can say that the surface represents the Symbolic field and that on this Symbolic field is cut out, I won't say the signifying chain because that introduces the word "chain," which will only be justified later, but a line is cut out, he talks about the double 8, the line that intersects itself, so he assimilates this double loop cut to what the signifier is and what the subject is as well. That is to say, with the Möbius strip that he cuts near its edge and up to the middle, he comes to define what he calls "a line without a point," that is, to equate the cut itself with either the signifier or the subject, that is, to obtain a completely real but immaterial support, a pure cut, in order to speak of the topology of the subject. In other words, something that goes beyond the work of mathematicians and topologists, since he says something unheard of, namely that a cut is the Möbius strip. So this is a phrase that he will repeat in *L'étourdit.* So, Virginia found a passage in *L'étourdit,* on page 47 I think, a passage from *L'étourdit* that she submitted to Christian Fierens [V. *Hasenbalg* – And also to a few others] yes, but

outside of us, and Fierens gave a very comprehensive answer in which he took up certain ideas from his book on the commentary of *L'étourdit*. So, well, it's a very complex question, and I disagree with what he proposes. Yes, he proposes, taking up Charles Melman's suggestion about the unconscious relating to the continuous and the real, the real of the continuous or the continuous of the real, saying in a way that if this is true, we have no access to it, that is to say, we only have access to what this real of the unconscious is through the discrete. In other words, he says that this dimension would be inaccessible without going through the discrete. So, I must say that... So he takes up the term "inaccessibility," which we find in *L'étourdit,* in this passage and in others, and he says, in a way, that this hypothesis of a continuous and real unconscious was not accessible. That is what he does with inaccessibility.
Then there is the real number. Lacan essentially encounters the real number when he tries to grasp the object petit *a*. That is to say, the object petit *a* appears as a real number in a sequence of rational numbers that would try to grasp it in a way. So, it's like the mathematical concept of the cut of the real number, the real number as a cut. There would be a sequence of failed relationships represented by rational numbers, that is, whole numbers in relation, and which—as in the story of Achilles and the Tortoise—would be the real number expressing the encounter between Achilles and the Tortoise, would be—to use the term—
"inaccessible" by rational numbers, by a sequence of ratios, either below or beyond this point of reality, or above it, that is, beyond this point of reality. It would not be possible to grasp because this point is not part of the rational or natural numbers but is part of the real numbers. So that is how the reference to real numbers comes into play in Lacan. And he also alludes to Cantor and what Henri was talking about earlier. But in the forbidden, he speaks [M. *D. corrects himself]*, in *L'étourdit* he speaks of inaccessibility—which can be made forbidden! – [V. *Hasenbalg* – That's your question.] the inaccessibility of the two. That is to say, he takes up this idea that he presented in ... *or worse,* that the two would be inaccessible and that this would be one of the formulations of the non-sexual relationship.
So where did he get this idea of the inaccessible two? Since he was heavily criticized for this idea by the philosopher Badiou, who in *Conditions* asks us, what is this story of the inaccessible two: one plus one equals two. So, it turns out that this question is very important, the question of inaccessibility is very important in what Henri introduced to us earlier, that is, the question of infinity. And Cantor, in what he presents, the $\aleph_0$ (*aleph-zero)*, $\aleph_1$ (*aleph 1)*, etc., that is, transfinite numbers. And I noticed that there may be some confusion on Fierens' part, or a shift, in that he seems to consider that transfinite numbers begin with $\aleph_1$. However, the first transfinite number is $\aleph_0$. So when Lacan talks about transfinite numbers in *L'étourdit,* he is talking about $\aleph_0$, $\aleph_0$ being the first, or at least the first inaccessible one, since we cannot obtain the cardinal $\aleph_{0\text{ number}}$ by adding, multiplying, or exponentiating finite numbers. You cannot create infinity by manipulating finite numbers; it is inaccessible, which is the meaning of the word inaccessible in *L'étourdit.*
So why does he say that two is unattainable? And therefore the consequence on non-sexual intercourse. Why does he say that two is inaccessible? Well, because there is an article by Gödel, which I brought here, found in Gödel's *Complete Works* and in Jean Largeault's book entitled *Intuitionism and the Theory of Demonstration.* It is an article on Cantor's continuum hypothesis. So, well, it's a bit complex because he talks about the inaccessible and notes that certain properties of inaccessible numbers do not occur in the sequence $\aleph_0$ (*aleph-zero)*, $\aleph_1$ (*aleph 1),* which makes him doubt, which makes Gödel doubt the relevance of the continuum hypothesis. Nevertheless, in this article, he gives a definition of what he means by "inaccessible." But what he means by inaccessible, as we have just seen, is in terms of transfinites, and the first transfinite $\aleph_0$ (*aleph-zero),*

zero), i.e., impossible to reach by multiplying or adding finite numbers. But he is talking about inaccessibility in finite numbers.
So how does he define inaccessibility in finite numbers?
Well, it involves obtaining a number by adding or multiplying or raising smaller numbers to a power, in terms of smaller quantities. That is, if we use products and sums starting from zero, we cannot obtain 1 by summing.
But we can obtain 1 by raising 0 to the power of zero. 0^0 is 1. Factorial zero is 1: 0! = 1
So, by raising 0 to the power of zero, 0^0, I am complying with the second condition, which is not to use a number of terms greater than what we already have, since we only have zero. We have set 0, we only have zero. We raise it to the power of zero and we have access to a higher number: 1.
Starting with 1, which we get from 0, can we get 2? Well, Badiou says yes, 1+1 equals 2. But to do 1 + 1, you already have to have 2, since you have to add two terms. So 1^1 0 + 1, $0^{(1)}$,etc. You can't do it, you can't make 2. Because you can't make 2 with less than two terms by adding them together, by raising them to a power, by taking the factorial, etc. So that's the meaning of the inaccessibility of 2 that Lacan uses in ... or *worse* to talk about sexual intercourse, and in *L'Étourdit.* There you go. So, well, we need to discuss this. I'm going to stop here for discussion, because we have to stop at noon. ***Maya Bendayan Malet*** – Marc, 0 to the power of zero gives 1, because 1 is identical to itself... since that's the definition you give.
Mr. Darmon – 2+3 equals 5. We can write 5 by writing 2+3, and yet 5 is identical to itself.
Mr. Bendayan Malet – Every number is identical to itself?
Mr. Darmon – Every number is identical to itself, yes. That's what makes it interesting in the example of numbers. When Freud tells us that dreams, for example, take numbers as they are, when in fact it was a number attached to a signifier: three apples. The dream takes the 3 and transposes it onto pears, for example. So it is the use of the number where the number remains constant, while the thing it counts is displaced.
Ch. Melman – Marc, I am very grateful that you have agreed to engage in a discussion on the topics we owe you. It is thanks to you and your work that we have this essential book, which we are using as a basis for our reflections. However, I would like to point out that if we do not have time for this discussion, this project is likely to quickly come to nothing. So, if you don't mind, I would be grateful if you would allow me a little time so that our work, which I hope will be a joint effort, can move forward and progress. For example, today, I had no intention of returning to the starting point, which you quite rightly contest today. My starting point. I had planned to continue, but since the emphasis has been placed on this debate, I must nevertheless agree to go back and revisit a few points that are indeed essential and form the basis for everything that will follow, that much is clear.
The definition of the continuous. In my view and in my opinion, it is simple. The continuous is that which resists being captured by the signifier or by number. There you have it. It turns out that there is continuity, that is to say, there is the very fact of language as we know it, there is the Real, that is to say, that which resists being captured by the signifier and by number. Is it the fate of the unconscious text to resist being captured by the signifier and by number? Certainly, because if this were not the case, it is quite obvious that we would be able to deal with the Unconscious as we deal with any field that presents itself to our analysis, that is, through the signifier and through number. There would be no specific problem posed by the Unconscious. However, it turns out that this text stubbornly stands in the way. I cannot, through a

concept or signifier account for the chain organized by the Unconscious, which obviously resists the scientific nature of numbers. That much is clear.
Why is 2 unattainable? Precisely because of what I have just said, which is that the 2 that interests us is not located in the same space as the 1 from which I am soliciting it. And this 2 is unattainable precisely because it is located in a space that is that of the Real, whose property, for better or worse, I don't know, is precisely to be continuous, that is, to resist my ability to organize this space through the signifier. So the 2, as you so aptly called it and emphasized, is indeed unattainable. And that is what writes the lack of sexual rapport. If there were indeed 1+1, there would obviously be no problem, as Badiou sympathetically suggests.
On the other hand, we are in a discipline where the cut, as we know, plays a major, organizing role in technique. But this cut that we are supposed to practice is not the one that reorganizes meaning, that proposes a meaning other than the one that was supposed to be included in the conscious sentence. It is a cut that always comes, finally, whose principle is to testify that where grammatically organized speech was based on a meaning, well, in reality, in place of that meaning, there is a Real. The break made by the Real is in fact what you are talking to, what you are addressing, and so at the same time, your meaning becomes an alibi. And as for what this meaning of the Real might be, have fun!
Mr. Darmon – Could you give an example of this...
Ch. Melman – Excuse me? No, no, I'm sorry, I won't give an example. I might give you one another day when we have time. But in any case, the break in the cure as Lacan proposes it, he proposes it very simply, he says: it is when he addresses you, when his words are addressed to you, that is to say, his words are not supported by the meaning that is supposed to organize them. His words are organized by the fact that he is addressing you, that is, someone whose intentions he does not know, nor even who you are.
So who is he talking to? That is precisely the problem.
So, to come back to what seems essential to me. Signifiers cannot form a continuum because, whatever their material property may be, including that of pure difference, of non-incarnation, they nevertheless have a physical structure. They may not be incarnated in this or that sound body, but they nevertheless have a physical structure; they are not purely ideal elements. They have a physical structure, and the characteristic of this physical writing, of this physical nature of the signifier, is that between two signifiers there i s precisely a break, a distinction. There is no proximity; one of the signifiers will not suddenly emerge between the two and bring them together. The very constitution of the signifier is that they are discrete elements, with the fact that between two signifiers there is what is called the subject in the cut and the object a, which has fallen. And so there is between two signifiers this irremediable cut, which in my view finds legitimate support only in the Euclidean plane, and the Euclidean plane as precisely the faithful support of an organized world of points. The continuum is not organized by points, since it is continuous.
So, you might say, yes, but I claim that it is organized by letters. Well, no, I don't claim that, I don't claim much of anything. But I would say that what interests us most in the signifier is what falls out of it, and which constitutes the Unconscious. That is to say, it is therefore the structure of the Unconscious that concerns us all the more, first because it is not that of the signifier, nor of the number, so what is it? It is literal. It is literal, let us note, in a language whose writing is alphabetic. I must say that we have colleagues who are interested, I would say, in introducing psychoanalysis to China or Japan, etc. I don't know how it works for me personally in these languages. That is to say, I don't know what element is likely to fall into writing, I would say,

conscious and likely to organize the unconscious. I have had Japanese patients, and I must say that my attempt to pin down this point, which obviously interested me greatly, provoked irritation and opposition, which made me understand that I should not touch on this, that my questioning was completely inappropriate. Well, let's leave that particular point aside.
In any case, the characteristic feature of this organization of the unconscious is that between two letters there is always room for a third, and between the first and the third thus introduced there is still room for another. This is demonstrated by the structure of dreams and their analysis. The analysis of a dream always ends with what Freud pointed out, which he called the navel. Well, we are clearly dealing with something that is, on the one hand, continuous, but a continuum that itself encounters something inaccessible. Moreover, this also amounts to saying that there is no final word; we will not find the final word in the Unconscious. That is to say, to repeat what you so kindly said, I would say that the most important of these remarks are quite substantial; they are obviously essential. Personally, I have always admired how excellently Saussurean you are. Lacan is not Saussurean; he uses De Saussure, but with psychoanalysis he approaches a field that can no longer be Saussure's.
And I will conclude, since it is time—it seems we have to leave at noon—and I will conclude with the example I wanted to start with today. That is, what De Saussure says about the sheet of paper that separates the signifier on one side and the signified on the other. Lacan's entire approach will be to try to account for this: how can what is on the other side, what is behind, what is underneath, pass over to the top? Because that is the major problem in our relationship with the Unconscious. How is it possible, I mean, it presupposes a physical support, it is not a purely ideal operation, it presupposes a physical body, which one is it? How, in the sheet of paper, how can what is there pass over there, and vice versa?
M. Darmon – The Möbius strip...
Ch. Melman – That's right, the Möbius strip! In other words, it creates this radical fracture, and thanks to psychoanalysis, we are no longer dealing with our submission to the Euclidean plane, i.e., the mirror, but we are dealing with the problem of the fact that what is behind comes to the front. And this has a consequence that seems very important to me, which is that at that moment, there is no longer what is in front and what is behind. In other words, the essential assertion is that the Unconscious is not just a minor accident, like a slip of the tongue, that disrupts everyday speech. It means that everyday speech, including the conversation we are having now, nicely among ourselves, is animated by the Unconscious. There is not, on the one hand, consciousness, which is somehow neutral and objective, and on the other hand, interference from the Unconscious. But the fact is that all our thinking is marked by the Unconscious, even if it protests when my thinking seems to want to ignore it or lie about it. So, for today, that was what I wanted to start with in order to move forward on something that I would very much appreciate, if you agree, being on the agenda for our next meeting. Why does Lacan insist so much on the two possible cuts in the Möbius strip? Nothing is ever random with him. If you would be so kind as to make some suggestions on this, I would be very grateful.
H. Cesbron Lavau – Thank you very much! Unfortunately, we have to cut here. We will meet again next Saturday. Thank you, Marc.

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